STEREO DOUBLE AUTO REVERSE CASSETTE DECK

X-58

SERVICE MANUAL

(MIDI M-58/58M/767/868M/969LD)

KENWOOD

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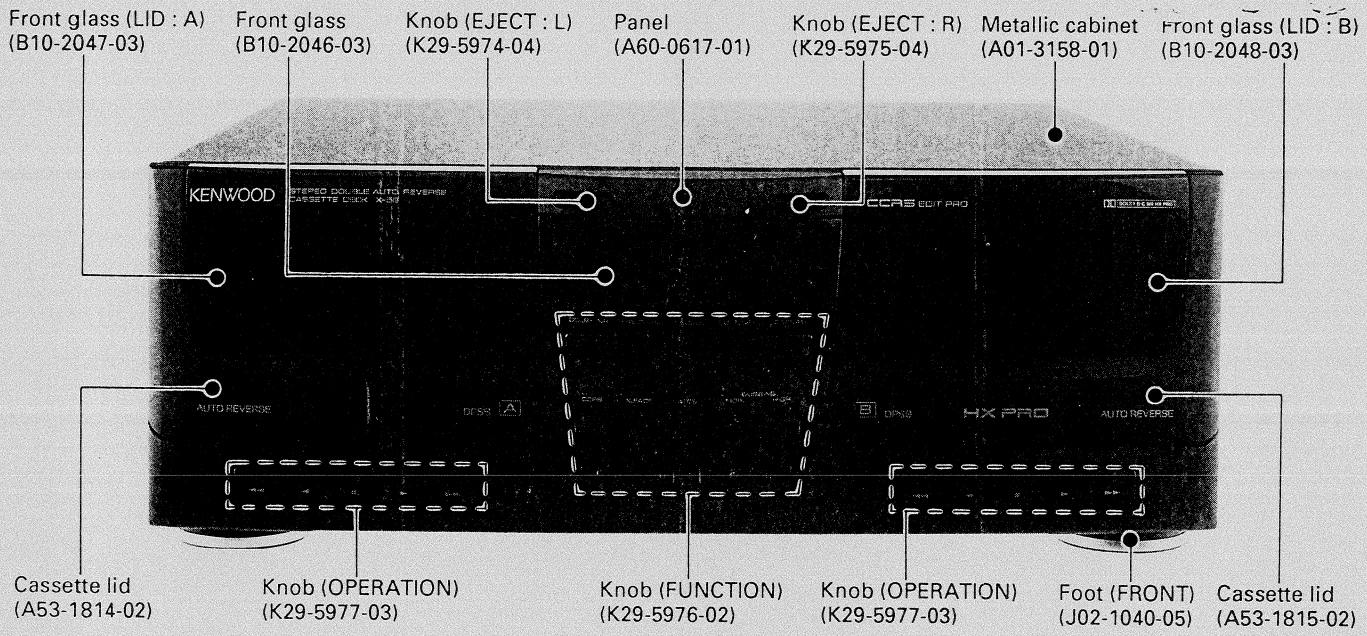

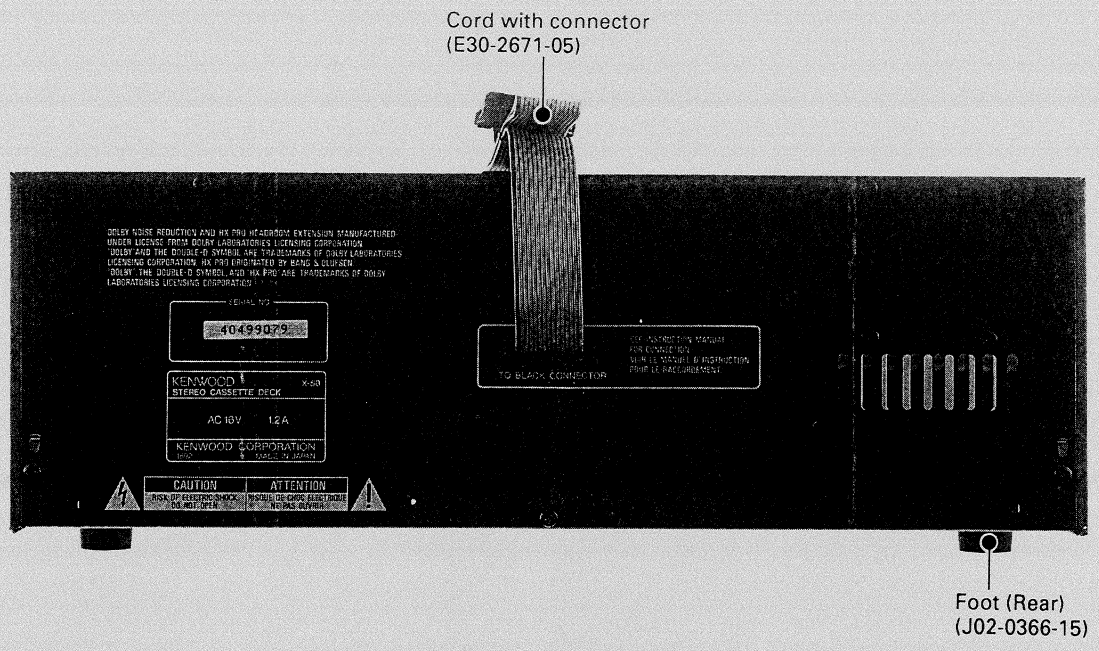

PRECAUTIONS FOR REPAIR

- Since power of this equipment is supplied by **A-58, A-68** of the power amplifier of the stereo system, these equipment and the jig (**RM-90PS + UA-93AD**) are needed when doing the repairs.
- Refer to **RXD-C3/C3L** service manual (**B51-4869-00**), if you want to know more information of **CASSETTE MECHANISM DESCRIPTION.**

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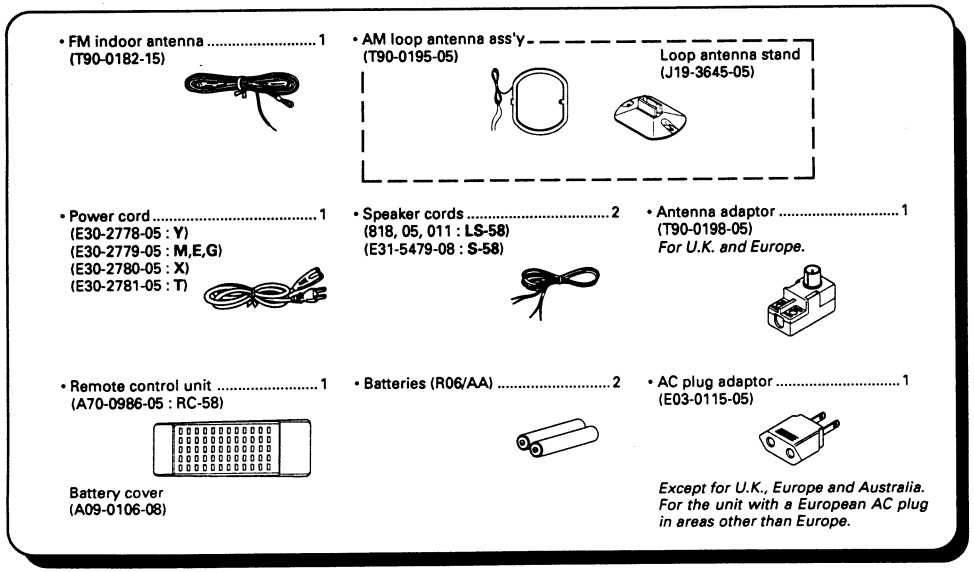
ACCESSORIES

1. System configuration

*(*Speaker cords are packed with the Speakers. All other accessories are packed with the Amp/GE unit.)*

System name	AMP / GE	TUNER	CD PLAYER	CASSETTE DECK	Speakers
MIDI M-58	A-58	T-58L	DP-58	X-58	LS-58
MIDI M-58M	A-58	T-58L	DP-M58	X-58	LS-58
MIDI M-767	A-58	T-58	DP-58	X-58	S-58
MIDI M-868M	A-58	T-58	DP-M58	X-58	S-58

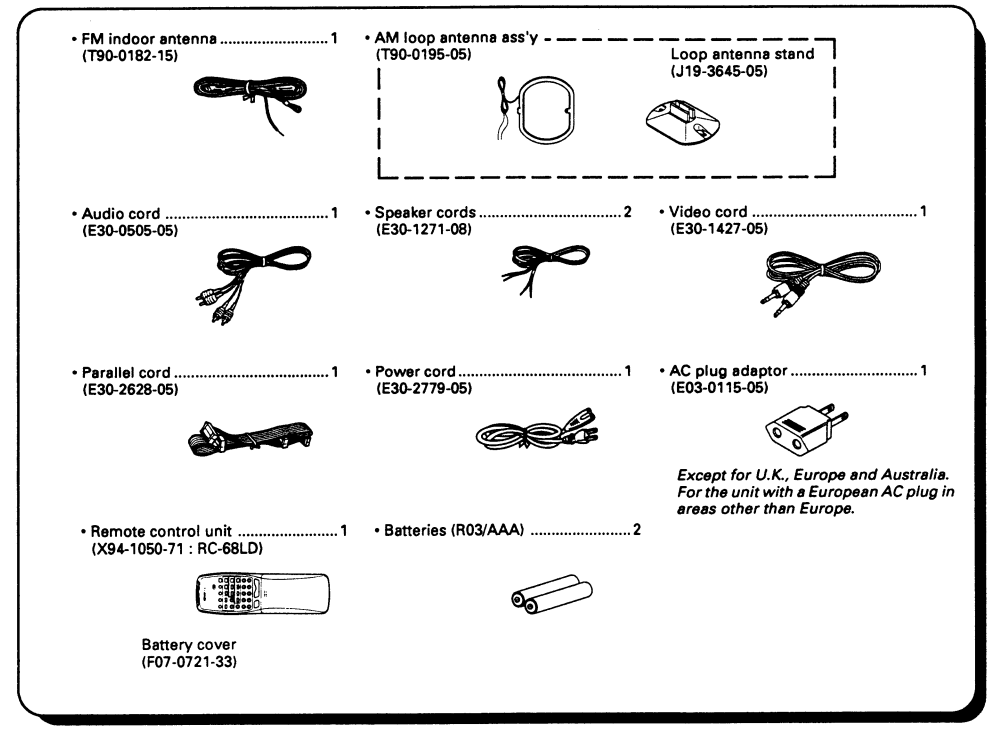


ACCESSORIES

2. System configuration

Speaker cords are packed with the Speakers. Remote control unit and batteries are packed with the CD/LD player unit.
All other accessories are packed with the Amp/GE unit.

System name	AMP / GE	TUNER	LD PLAYER	CASSETTE DECK	Speakers
MIDI M-969LD	A-68	T-58	LVD-68	X-58	S-68



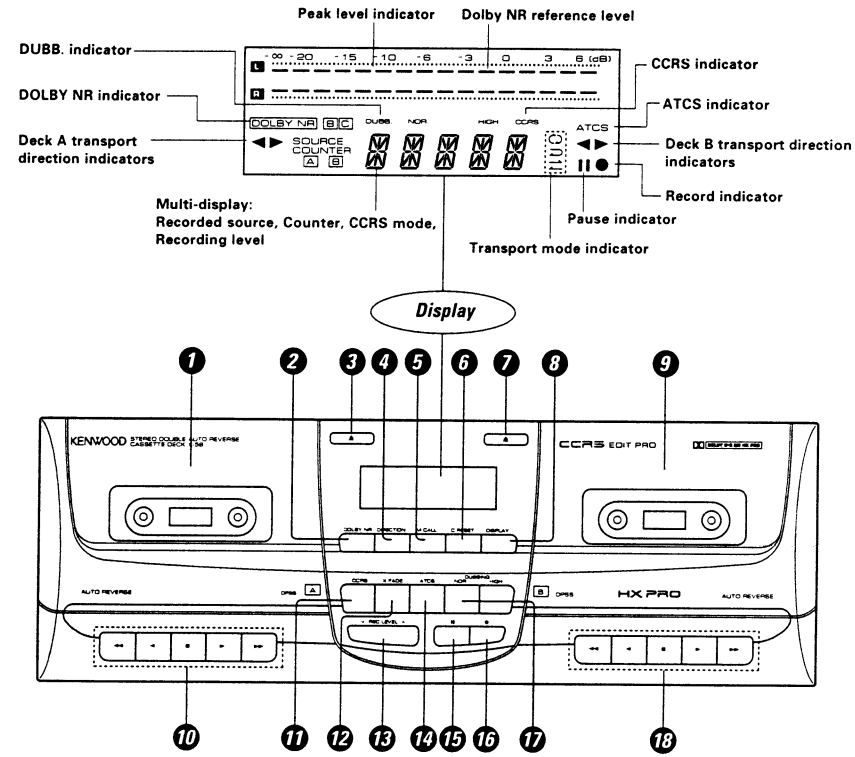
Beware of condensation

When water vapor comes into contact with the surface of cold material, water drops are produced.
If condensation occurs, correct operation may not be possible, or the unit may not function correctly.
This is not a malfunction, however, and the unit should be dried.
(To do this, turn the POWER switch ON and leave the unit as it is for several hours.)

Be especially careful in the following conditions :

- When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
- When a heater starts operating.
- When the unit is brought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

CONTROL

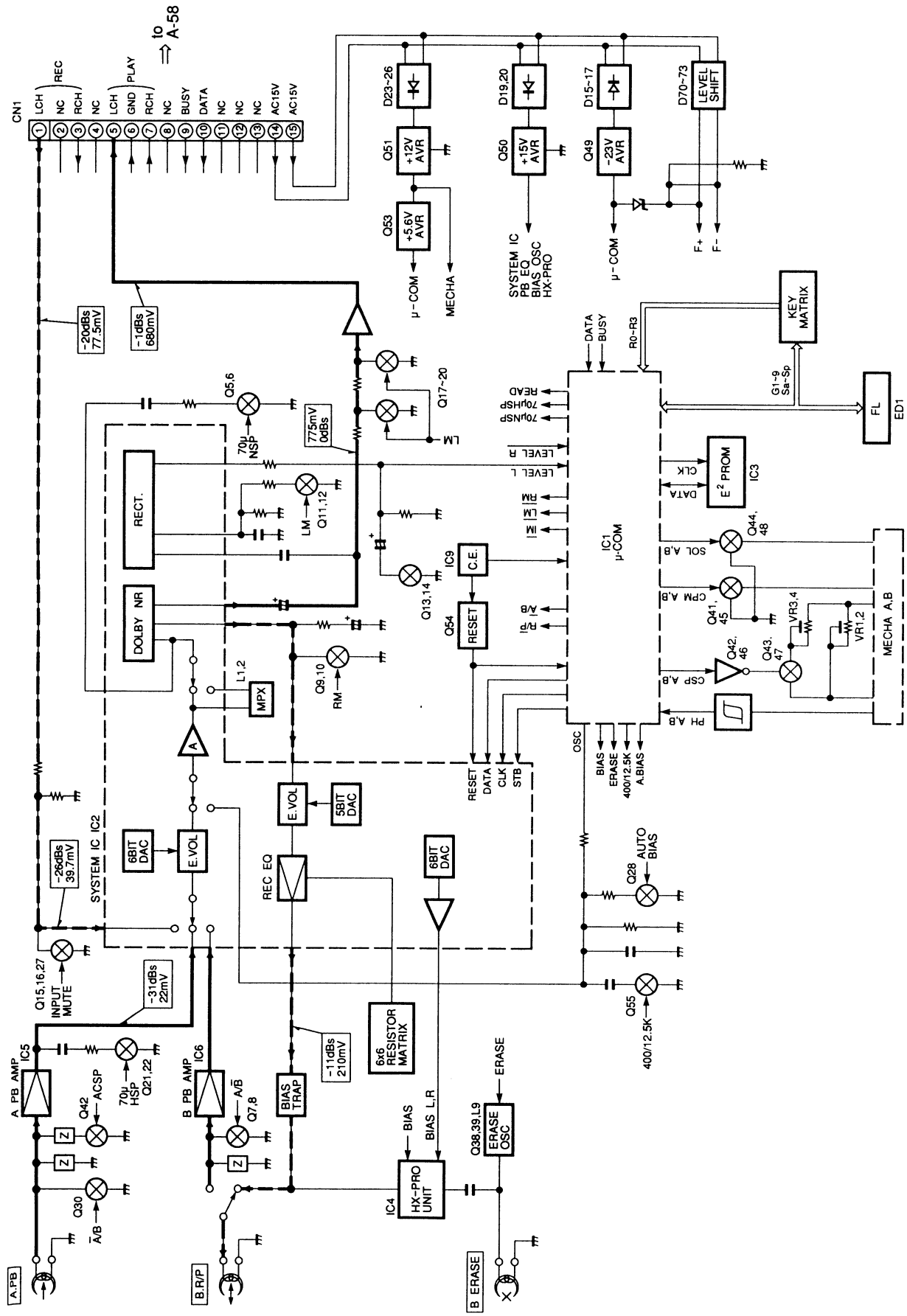


❶ **Deck A cassette holder**
❷ **DOLBY NR key**
❸ **Deck A eject key**
❹ **DIRECTION key**
❺ **M. CALL key**
Press to recall a previously-set ATCS value.
❻ **C. RESET key**
Press to reset the tape counter to 0.
❼ **Deck B eject key**
❽ **DISPLAY key**
Press to change the display contents.

❾ **Deck B cassette holder**
❿ **Deck A operation keys**
◄, ► Play keys
■ Stop key
►► Fast Forward key
◄◄ Rewind key
⓫ **CCRS keys**
Press to start recording after having set the optimum recording level for the CD and the optimum recording sensitivity/bias for the tape automatically.
⓬ **X.FADE (Cross-fade) key**

⓭ **REC LEVEL key**
Press to adjust the recording level.
⓮ **ATCS key**
⓯ **Pause key (II)**
⓰ **Record key (●)**
⓱ **DUBBING keys (NOR., HIGH)**
Press for dubbing between tapes.
⓲ **Deck B operation keys**
◄ ► Play keys
■ Stop key
►► Fast Forward key
◄◄ Rewind key

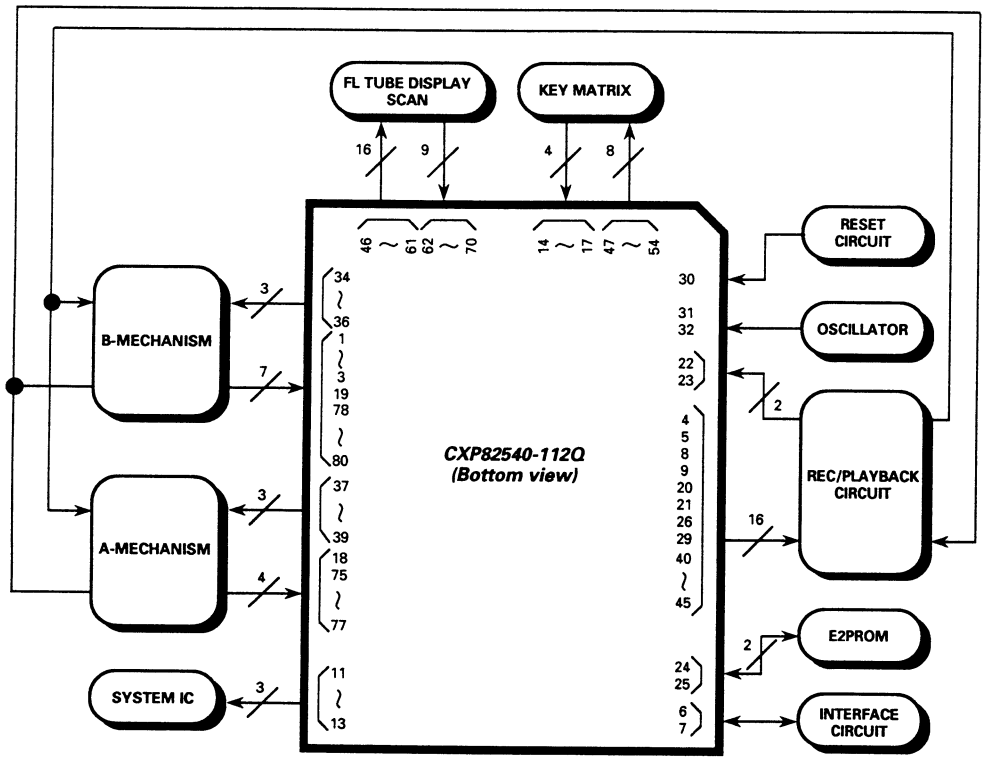
BLOCK DIAGRAM



CIRCUIT DESCRIPTION

1. μ-Com : CXP82540-112Q (X28-2680, IC1)

1-1. μ-com periphery block diagram



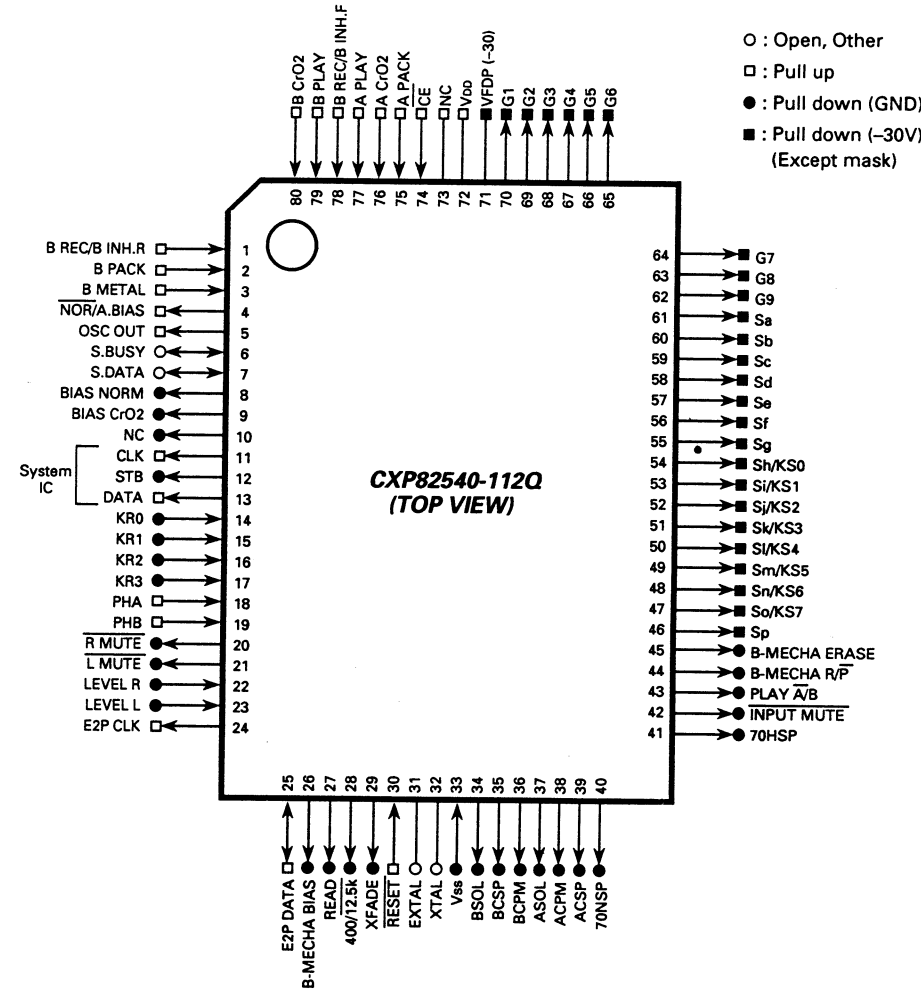
1-2. Key matrix [( ) : μ-com IC port No.]

	KS0 (54)	KS1 (53)	KS2 (52)	KS3 (51)	KS4 (50)	KS5 (49)	KS6 (48)	KS7 (47)
KR0 (14)	A ▶	A ■	B ▶	B ■	◫	X-FADE	C.RST	A.ADJ
KR1 (15)	A ◀	–	B ◀	B ●	DIR	N.DUBB	UP	13REC
KR2 (16)	A ▶▶	–	B ▶▶	B ▮▮	M.CALL	H.DUBB	DOWN	M.ADJ
KR3 (17)	A ◀◀	–	B ◀◀	TEST2	N.CCRS	DISP	ATCS	TEST1

Note : The mechanism is controlled in the port direct (static) mode.

CIRCUIT DESCRIPTION

1-3. Terminal connection



1-4. Port control [( ) : μ-com IC port No.]

		70NSP (40)	70HSP (41)
NORMAL (120μ)	NORMAL-SPEED	L	L
CrO2, METAL (70μ)	NORMAL-SPEED	H	L
NORMAL	HIGH-SPEED	L	H
CrO2, METAL	HIGH-SPEED	L	L

CIRCUIT DESCRIPTION

1-5. Terminal description

No.	Name	I/O	Description
1	B REC/B INH.R	I	B-mechanism RVS recording prohibition detection. ("H" : Prohibition)
2	B PACK	I	B-mechanism half detection. ("L" : Half present)
3	B METAL	I	B-mechanism metal tape detection. ("H" : Metal)
4	NOR/A.BIAS	O	OSC attenuator. ("L" : ON)
5	OSC OUT	O	400/12.5k rectangle-wave output.
6	S.BUSY	I/O	Serial BUSY input/output.
7	S.DATA	I/O	Serial DATA input/output.
8	BIAS NORM	O	Rec mute BIAS normal. ("H" : Normal)
9	BIAS CrO2	O	Rec mute BIAS CrO2. ("H" : CrO2)
10	NC	O	Not used. (Pull down)
11	CLK	O	System IC clock output.
12	STB	O	System IC strobe signal input.
13	DATA	O	System IC serial data output.
14~17	KR0~KR3	I	Key scan signal input.
18	PHA	I	A-mechanism rotation detection input.
19	PHB	I	B-mechanism rotation detection input.
20	R MUTE	O	Rec mute control. ("L" : ON)
21	L MUTE	O	Line mute control. ("L" : ON)
22	LEVEL R	I	CCRS, DPSS Rch signal input.
23	LEVEL L	I	CCRS, DPSS Lch signal input.
24	E2P CLK	O	E2PROM clock output.
25	E2P DATA	I/O	E2PROM data input/output.
26	B-MECHA BIAS	O	B-mechanism bias ON/OFF control. ("H" : ON)
27	READ	O	Reading : 12.5k ("H" : ON)
28	400/12.5k	O	Rectangle-wave filter selector. ("H" : 400Hz)
29	XFADE	O	X-fade erase head control. ("H" : ON)
30	RESET	I	Reset signal input. ("L" : Reset)
31, 32	EXTAL, XTAL	I	Clock oscillator connection terminal. (10MHz)
33	Vss	–	GND
34	BSOL	O	B-mechanism solenoid control. ("H" : ON)
35	BCSP	O	B-mechanism capstan motor select switch. ("H" : Normal, "L" : High-speed)
36	BCPM	–	B-mechanism capstan motor control. ("H" : ON)
37	ASOL	O	A-mechanism solenoid control. ("H" : ON)
38	ACPM	O	A-mechanism capstan motor control. ("H" : ON)
39	ACSP	O	A-mechanism capstan motor select switch. ("H" : Normal, "L" : High-speed)
40	70NSP	O	EQ SP NORMAL & BIAS 70μs ("H" : ON)
41	70HSP	I/O	EQ SP HIGH & BIAS 70μs ("H" : ON)
42	INPUT MUTE	I/O	External input mute selector. ("L" : ON)
43	PLAY A/B	I/O	A/B head select switch ("H" : B-head ON)
44	B-MECHA R/P	I/O	B-mechanism REC/PLAY select switch ("H" : ON)
45	B-MECHA ERASE	O	B-mechanism erase head ON/OFF select switch ("H" : ON)
46, 55~61	Seg p, Seg o~a	O	FL tube segment signal output. ("H" : ON)
47~54	KS7~KS0	O	Key scan signal output. ("H" : Scan)
62~70	Grid 9~Grid 1	O	FL tube grid signal output. ("H" : ON)
71	VFDP	–	FL tube drive voltage. (–30V)
72	VDD	–	Power supply. (+5V)
73	NC	–	Not used. (+5V)
74	CE	I	Back up detection terminal. ("L" : Back up)
75	A PACK	I	A-mechanism half detection. ("L" : Half present)
76	A CrO2	I	A-mechanism CrO2 tape detection. ("H" : CrO2)
77	A PLAY	I	A-mechanism head position detection. ("L" : Play)
78	B REC/B INH.F	I	B-mechanism FWD recording prohibition detection. ("H" : Prohibition)
79	B PLAY	I	B-mechanism head position detection. ("L" : Play)
80	B CrO2	I	B-mechanism CrO2 tape detection. ("H" : CrO2)

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CIRCUIT DESCRIPTION

1-6. Initial condition of each port

Item	Condition
R/P	PLAY
A/B	A
70EQ NOR SP	ON
70EQ HI SP	OFF
REC MUTE	ON
LINE MUTE	ON
INPUT MUTE	ON
BIAS	OFF
ERASE	OFF
SELECTOR	TUNER
ELECTRIC VOLUME	–15dB
OSC OUT	OFF
XFADE (ERASE)	OFF
NOR/A.BIAS	A.BIAS
BIAS NOR	OFF
BIAS CrO2	ON
400/12.5k	400Hz
BIAS READ	OFF
SOL	OFF
CPM	ON (1sec)→OFF
CSP	NORMAL

- **Initial setting condition**

After setting in the adjustment mode (Automatic adjustment, Self adjustment) or test mode, disconnect the power plug and connect it again, and the system is set under the initial condition.

2. Explanation of Operation of Deck Unit Circuit

The power is turned ON and OFF with the POWER switch of the power amplifier unit, and the deck unit senses resetting of the μ-com, then it starts.
While the power for the amplifier is turned off, the voltage is not applied to the deck unit.

2-1. When the power is turned on

If the back-up check data in the E2PROM are normal, the contents backed up are read from the E2PROM and written in the RAM, then the deck starts.
If the back-up check data is abnormal, the initial data are written in the RAM, then the deck starts under the initial condition.

The FL tube lights up 0.5 seconds after, and the mechanism is initialized. It takes 3.5 seconds to initialize the mechanism. Then, keys are accepted to start the other operations.

2-2. When the power is turned off

The FL tube goes off. If the deck has been in operation, it is stopped (When the system OFF code is received). The data to be backed up under the present condition are written in the E2PROM for backing up.

The items backed up are the direction of the A/B deck, REC level data of each source, DOLBY condition and direction mode.
The CCRS reference level (threshold value to set the REC level) is also backed up as a special mode. (For the detail, see below.)

2-3. Back-up function

The items backed up and their initial conditions are as follows.

	Back-up condition	Initial condition
Direction mode	⇄, ⇉, ⇇	⇉
A direction	◀, ▶	▶
B direction	◀, ▶	▶
DOLBY mode	OFF, B, C	OFF
REC source	TUNER, PHONO, AUX CD/LD, VIDEO, MD	TUNER
REC level	0dB~–∞dB	Center value –15dB
CCRS reference level	–3dB~3dB	±0dB

CIRCUIT DESCRIPTION/ADJUSTMENT

3. Test Mode

The system enters this test mode when KS7 (TP6) and KR3 (TP4) are shorted together with a diode and the AC power plug connect to the AC outlet.

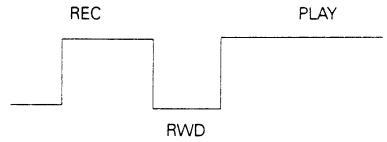
Cancel method : Press the PAUSE key or disconnect the AC power plug from the AC outlet.

1. Lamp display
All the indicators turn on 500ms after the power is switched on and remain on for 1500ms.

2. Mechanical (leaf) switch display
Each switch state is displayed on the level meter when the line muting signal is on.
The level meter lights when the mechanical switch is set to ON. Deck A set to the left channel and deck B to the right channel.
The level meter is indicated during the PLAY mode.

3. Recording level
The recording level is changed to three steps (-∞dB↔ -15dB↔ 0dB) with the REC LEVEL ([▽△]) key.

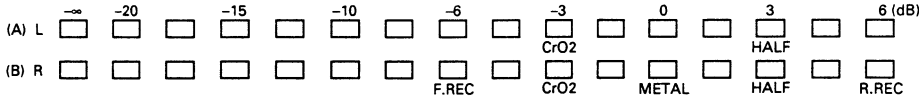
4. Four seconds recording
Record for four seconds, return to the beginning, and playback (can be repeated).



The REC mode is started by changing this DOLBY. The DOLBY is turned off with the STOP key.
NORMAL tape : OFF
CrO2 tape : DOLBY C
METAL tape : DOLBY B

5. Playback speed switching
The tape is playback at high-speed in the forward direction by pressing the FF key.
(The Forward PLAY, Reverse PLAY, and RWD keys cannot be used for playback.)

6. Input level attenuation
The REC PAUSE mode is entered by pressing the CCRS key. In this case, an attenuator is activated so that the output is 0dBm when a signal is input.
(When deck A stops and deck B has a recordable tape.)



Playback Level & REC Level Adjustment

1. Automatic adjustment

• Playback level adjustment

1. Turn the POWER OFF (AC OFF).
2. Insert the TCC-130 into respective deck A or B.
3. Short TP6-TP7 and turn the AC plug receptacle ON.
4. When "END P" is displayed in FL, adjustment is complete.
   If an error occurs, it will display the location causing the "CAL E", "PL E", etc.
   Turn the POWER OFF (AC OFF) or the REC PAUSE key twice (one press is for the test mode) to return to normal operation.

• Recording level and bias adjustment

1. Turn the POWER OFF (AC OFF).
2. Insert the TCC-106A into deck B.
3. Short TP6-TP7 and turn the AC plug receptacle ON.
4. When "END" is displayed in FL, adjustment is complete.
   If an error occurs, it will display the location causing the "RL E", "BL E", etc.
   Turn the POWER OFF (AC OFF) or the PAUSE key twice (one press is for the test mode) to return to normal operation.

ADJUSTMENT

• Indication items of FL tube

END P.....Normal completion state of playback level adjustment mode.
END.....Normal completion state of all (playback/REC level) adjustment mode.
CAL E.....Lch ERR state of sensitivity correction.
CAR E.....Rch ERR state of sensitivity correction.

Counter A
PL E.....Lch ERR state of A PB adjustment.
PR E.....Rch ERR state of A PB adjustment.

Counter B
PL E.....Lch ERR state of B PB adjustment.
PR E.....Rch ERR state of B PB adjustment.

Counter B
RL E.....Lch ERR state of B REC EQ adjustment.
RR E.....Rch ERR state of B REC EQ adjustment.

Counter B
BL E.....Lch ERR state of B BIAS adjustment.
BR E.....Rch ERR state of B BIAS adjustment.

NOTE :

- The playback level can be adjusted independently for A or B. The procedure in this case as well is as in the above procedure.
- Turn off the display to suppress power fluctuations and other such problems during automatic adjustment.
- The playback level adjustment is done with the DOLBY level as the standard value, so be sure to use a 200nWb/m (315Hz or 400Hz) tape.

2. Manual adjustment

• Playback level adjustment

1. Turn the POWER OFF (AC OFF).
2. Turn the AC plug receptacle ON while shorting the TP3-TP6. Then open TP3-TP6.
3. Insert the TCC-130 into deck A and play.
4. Deck A Lch level adjustment
   The initial FL display is "PL 00". The "00" displays the step number. Since the initial value is set at 30, adjust it at this setting by turning the REC LEVEL ([▽△]) key.
   Adjustment level : TCC-130 (200nWb/m)→ -1dBs (690mV). When using 160nWb/m or 250nWb/m tapes set to 4dBs and 0dBs respectively.
5. Press the DUBB NOR key.
6. When the DISPLAY key is pressed, the display switches to the "PR 00".
7. Deck A Rch level adjustment : Same as Lch
8. Press the DUBB NOR key.
9. Press the DISPLAY key.
10. Insert the TCC-130 into deck B and play.
11. Deck B Lch level adjustment
12. Press the DUBB NOR key.
13. Press the DISPLAY key.
14. Deck B Rch level adjustment
15. Press the DUBB NOR key.
16. Press the DISPLAY key.

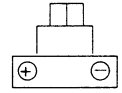
• Recording level and bias adjustment

1. Insert the recording tape into deck B (A BEX TCC-106A or TDK AC-224) and set the AG to 400Hz.
2. Press the REC key to start recording and adjust the AG so that the output becomes -20dBs.
   (If you press the PAUSE key at this time, manual adjustment will be cancelled, so be careful.)
   Playback the recorded tape and turn the level volume so that the output becomes -20dBs.
   (It changes about 0.2dB with each step.)
   Lch REC level adjustment.
3. Press the DUBB NOR key.
4. Press the DISPLAY key.
5. Rch REC level adjustment : Same as Lch
6. Press the DUBB NOR key.
7. Press the DISPLAY key.
8. Set the AG to 125kHz, then press the REC key to begin recording. Adjust yhe AG so that the output becomes -20dBs. Playback the recorded tape and adjust the level volume so that the output becomes -20dBs.
   (It changes about 0.4dB~0.5dB with each step.)
   Lch REC bias adjustment.
9. Press the DUBB NOR key.
10. Press the DISPLAY key.
11. Deck B Rch bias adjustment
12. Press the DUBB NOR key.

NOTE :

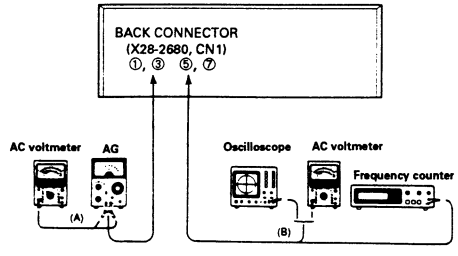
- The PAUSE key cancels the Adjustment mode, so do press it during adjustment.
- When adjusting manually, the DUBB NOR key and DUBB HIGH key respectively become the MODE WRITE and ALL WRITE keys, so you need not press the DUBB NOR key for each adjustment mode and can just press the DUBB HIGH key when all the adjustments have been completed.
- When manual adjustment is turned on, all the adjustment data is initialized, so whether or not you make an adjustment, at the end, after writing data, you should cancel using the DUBB HIGH key or another key.

ADJUSTMENT

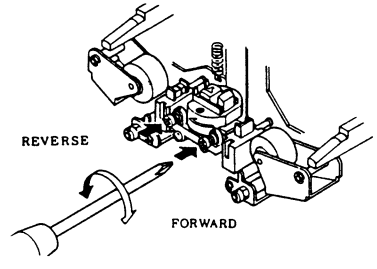
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	CASSETTE TAPE DECK SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Unless otherwise specified, set the respective switches as follows : TAPE : NORMAL, DOLBY : OFF						**0dBs=0.775V**	
I. Cassette mechanism unit (Adjustment of the REC/PLAY HEAD)							
(1)	DEMAGNETIZATION and CLEANING	–	–	POWER OFF Demagnetization Cleaning PLAY	REC/PLAY head Erase head Capstan Pinch roller	Demagnetize the REC/PLAY head with a head eraser. Clean the REC/PLAY head erase head, capstan and pinch roller using a cotton swab slightly damped with alcohol.	
(2)	AZIMUTH of the REC/PLAY HEAD	SCC-1727 TCC-153 MTT-114 10kHz, –10dB	–	PLAY	 RVS FWD	Adjust the output to maximum and adjust the azimuth adjustment screw for the Lissajous waveform pattern of the oscilloscope to become close to a 45° straight line.	(a)
II. PC BOARD adjustment		**Note : Carry out the high-speed adjustment in the first place.**					
[1]	TAPE SPEED (HI SPEED)	SCC-1727 TCC-110 MTT-111 3kHz	–	*TEST MODE	VR1 (A) VR2 (B)	Adjust the tape speed so that 6kHz is obtained at the center of the tape.	
[2]	TAPE SPEED (NORMAL)				VR3 (A) VR4 (B)	Adjust the tape speed so that 3kHz is obtained at the center of the tape.	

* Short circuit TP4, TP6 and turn the POWER ON. FF key : High-speed, FWD key : Normal-speed.

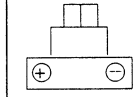
System connections



(a) Azimuth adjustment screw

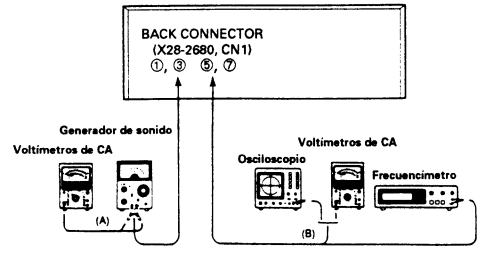


AJUSTES

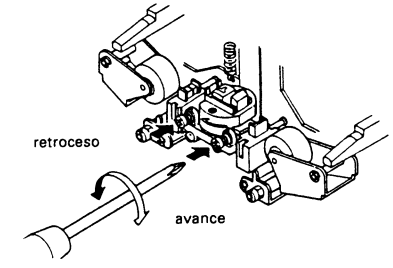
Núm.	ÍTEM	AJUSTES DE ENTRADA	AJUSTES DE SALIDA	AJUSTES DEL DECK DE CASETES	PUNTOS DE ALINEACIÓN	ALINEACIÓN PARA	FIG.
A menos que se especifique otra cosa, ajuste los controles respectivos de la forma siguiente :						**0dBs=0.775V**	
CINTA: NORMAL, DOLBY: DESACTIVADO							
I. UNIDAD DEL MECANISMO DEL CASETE (AJUSTE DE LA CABEZA GRABADORA/REPRODUCTORA)							
(1)	DESMAGNETIZACIÓN y LIMPIEZA	–	–	Alimentación : Desconectada Desmagnetización, limpieza, y reproducción	Cabeza Grabadora/ Reproductora, cabeza borradora, eje de arrastre, rodillo compresor	Desmagnetice la cabeza Grabadora/Reproductora con un cabeza borradora. Limpie la cabeza Grabadora/ Reproductora, la cabeza borradora, el eje de arrastre, y el rodillo compresor utilizando un palillo de cabeza de algodón ligeramente humedecido en alcohol.	
(2)	ACIMUT de la CABEZA GRABADORA/ REPRODUCTORA	SCC-1727 TCC-153 MTT-114 10kHz, –10dB	–	REPRODUCCIÓN	 RVS FWD	Ajuste la salida al máximo, y regule el tornillo de ajuste del acimut hasta que el patrón de las forma de onda de Lissajous del osciloscopio se acerque a una línea recta de 45°.	(a)
II. AJUSTE DE LA TARJETA DE CIRCUITO IMPRESO		**Nota : Realice en primer lugar el ajuste de alta velocidad.**					
[1]	VELOCIDAD de la CINTA (ALTA VELOCIDAD)	SCC-1727 TCC-110 MTT-111 3kHz	–	*MODE DE PRUEBA	VR1 (A) VR2 (B)	Ajuste la velocidad de la cinta de forma que en el centro de la misma se obtengan 6kHz.	
[2]	VELOCIDAD de la CINTA (NORMAL)				VR3 (A) VR4 (B)	Ajuste la velocidad de la cinta de forma que en el centro de la misma se obtengan 3kHz.	

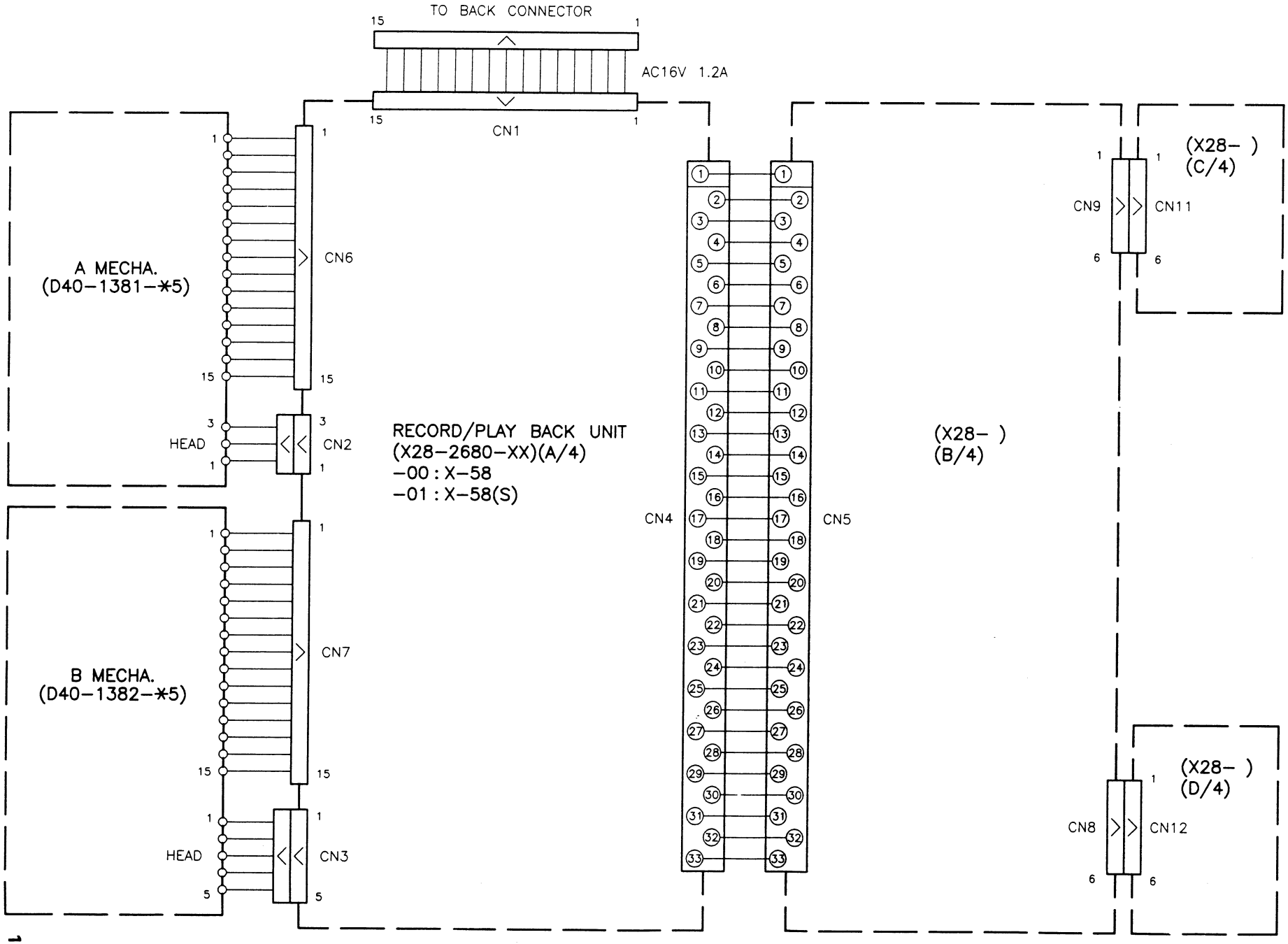
*Cortocircuite TP4 v TP6, conecte la alimentación, presione. La tecla FF : alta velocidad, la tecla FWD : velocidad normal.

CONEXIONES DEL SISTEMA

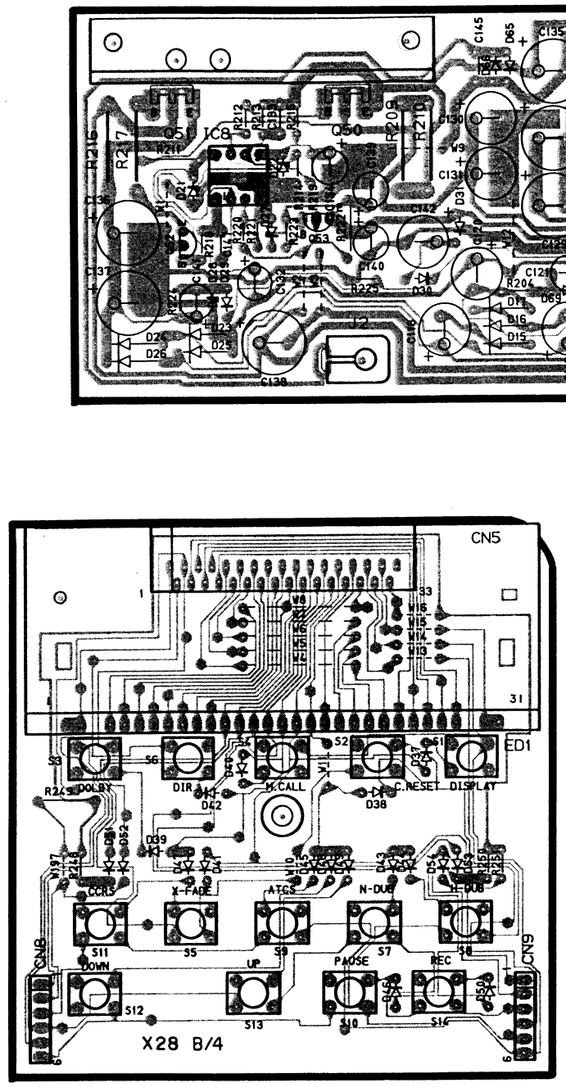


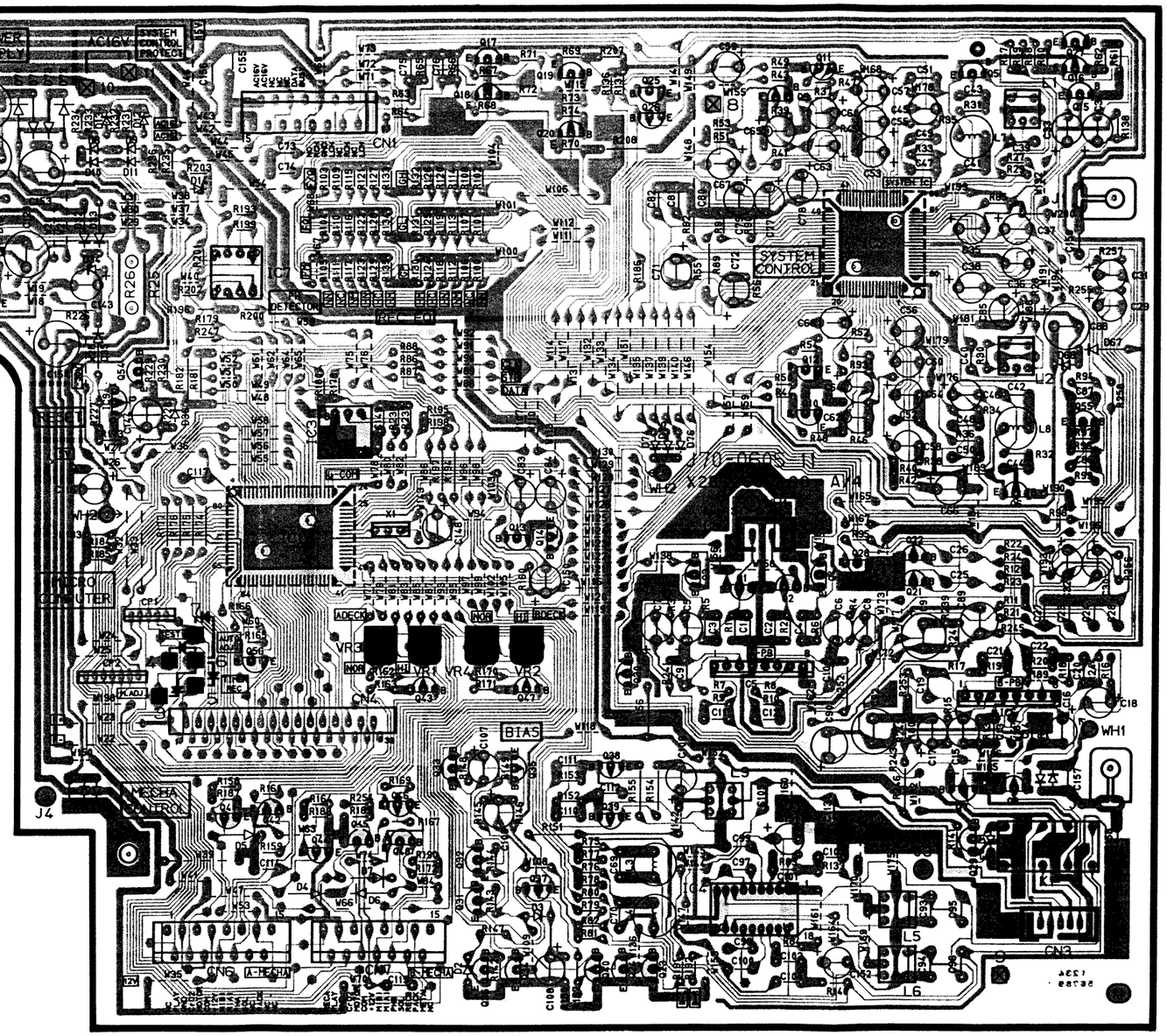
(a) ACIMUT

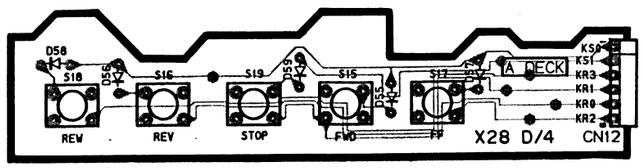


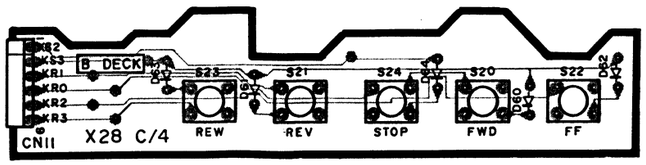

TO BACK CONNECTOR
15
1
AC16V 1.2A
15
1
CN1
A MECHA.
(D40-1381-*5)
CN6
HEAD
CN2
B MECHA.
(D40-1382-*5)
CN7
HEAD
CN3
RECORD/PLAY BACK UNIT
(X28-2680-XX)(A/4)
-00 : X-58
-01 : X-58(S)
CN4
CN5
(X28-)
(B/4)
(X28-)
(C/4)
CN9
CN11
(X28-)
(D/4)
CN8
CN12

PC BOARD (COMPONENT SIDE VIEW)



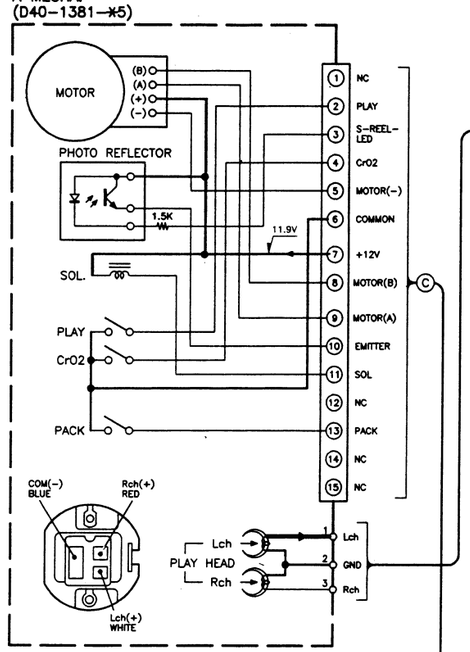




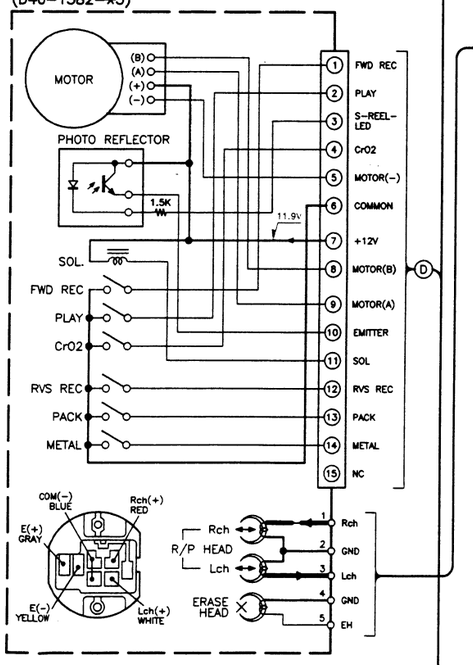


Refer to the schematic diagram for the values of resistors and capacitors.

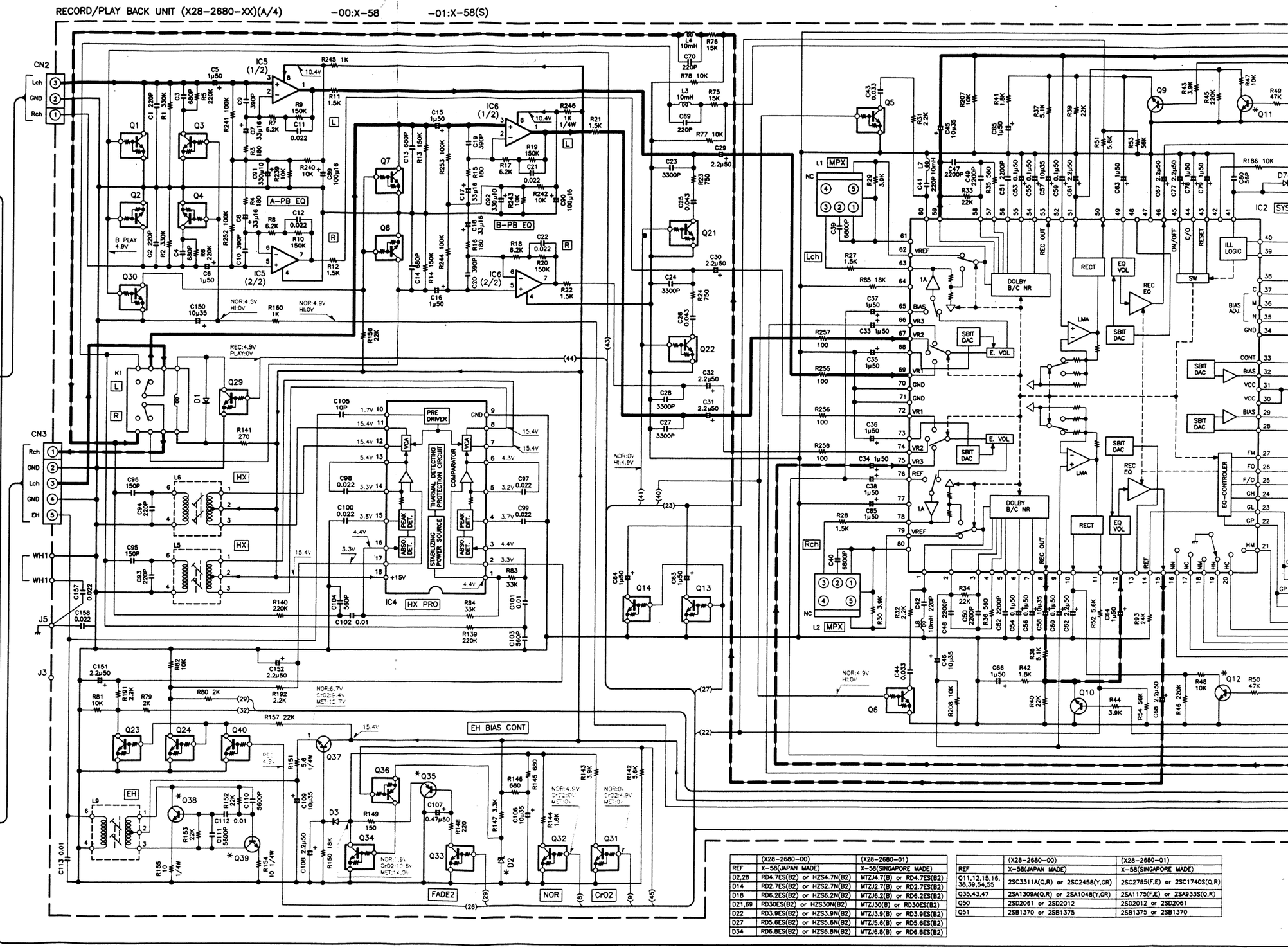
A MECHA.
(D40-1381-*5)



B MECHA.
(D40-1382-*5)



RECORD/PLAY BACK UNIT (X28-2680-XX)(A/4) -00:X-58 -01:X-58(S)

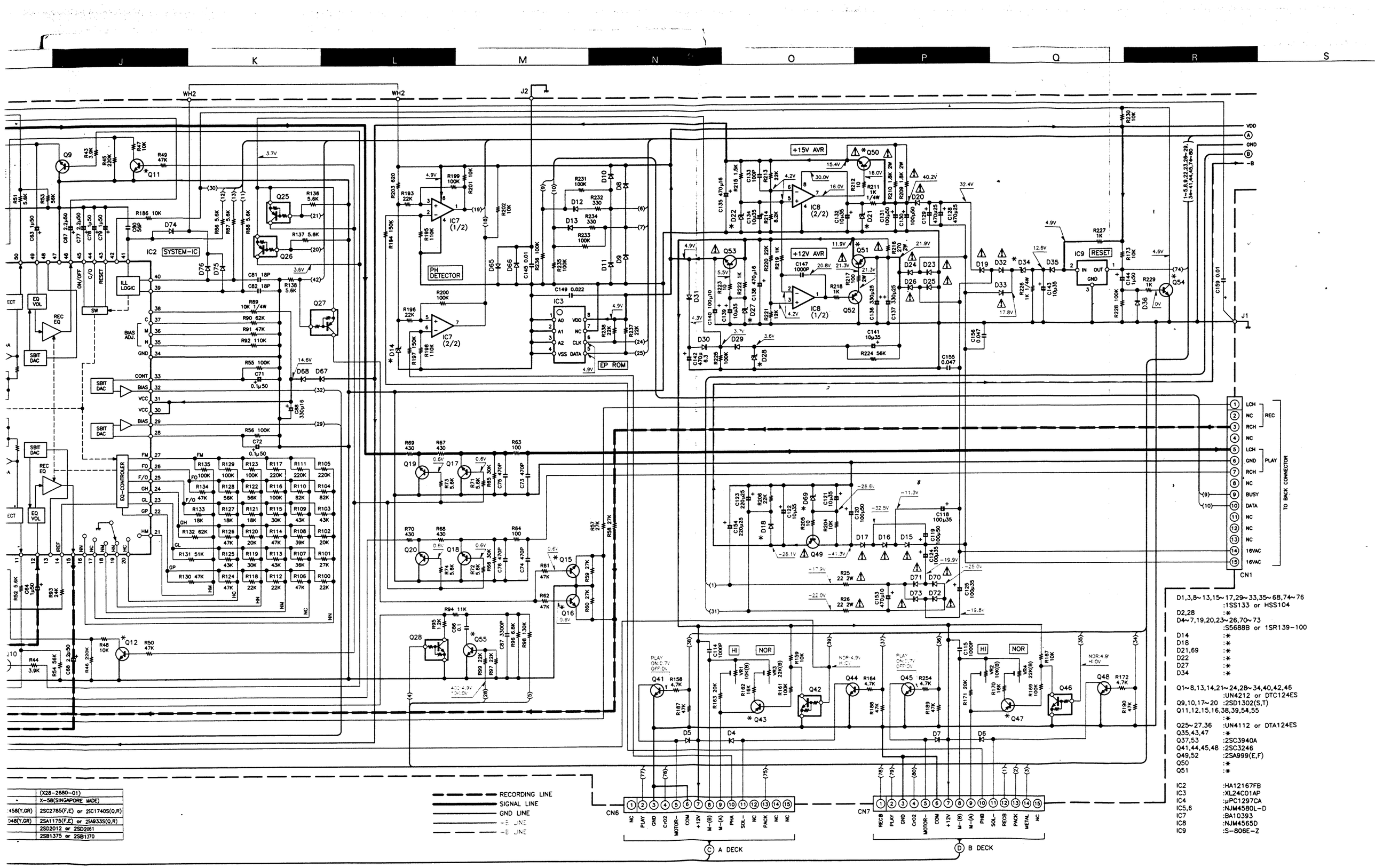


REF	(X28-2680-00) X-58(JAPAN MADE)	(X28-2680-01) X-58(SINGAPORE MADE)
D2,28	RD4.7ES(B2) or HZS4.7N(B2)	MTZJ4.7(B) or RD4.7ES(B2)
D14	RD2.7ES(B2) or HZS2.7N(B2)	MTZJ2.7(B) or RD2.7ES(B2)
D18	RD6.2ES(B2) or HZS6.2N(B2)	MTZJ6.2(B) or RD6.2ES(B2)
D21,69	RD30ES(B2) or HZS30N(B2)	MTZJ30(B) or RD30ES(B2)
D22	RD3.9ES(B2) or HZS3.9N(B2)	MTZJ3.9(B) or RD3.9ES(B2)
D27	RD5.6ES(B2) or HZS5.6N(B2)	MTZJ5.6(B) or RD5.6ES(B2)
D34	RD6.8ES(B2) or HZS6.8N(B2)	MTZJ6.8(B) or RD6.8ES(B2)

REF	(X28-2680-00) X-58(JAPAN MADE)	(X28-2680-01) X-58(SINGAPORE MADE)
Q11,12,15,16, 38,39,54,55	2SC3311A(Q,R) or 2SC2458(Y,GR)	2SC2785(F,E) or 2SC1740S(Q,R)
Q35,43,47	2SA1309A(Q,R) or 2SA1048(Y,GR)	2SA1175(F,E) or 2SA933S(Q,R)
Q50	2SD2061 or 2SD2012	2SD2012 or 2SD2061
Q51	2SB1370 or 2SB1375	2SB1375 or 2SB1370

- DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer. DOLBY and the double-D symbol are trademarks of Dolby Laboratories. Licensing Information. Noise reduction circuitry made under license from Dolby Laboratories Licensing Corporation.



	(X28-2680-01)
-	X-58(SINGAPORE MADE)
458(Y,GR)	2SC2785(F,E) or 2SC1740S(Q,R)
048(Y,GR)	2SA1175(F,E) or 2SA933S(Q,R)
	2SD2012 or 2SD2061
	2SB1375 or 2SB1370

D1,3,8~13,15~17,29~33,35~68,74~76 :1SS133 or HSS104
D2,28 :*
D4~7,19,20,23~26,70~73 :S5688B or 1SR139-100
D14 :*
D18 :*
D21,69 :*
D22 :*
D27 :*
D34 :*

Q1~8,13,14,21~24,28~34,40,42,46 :UN4212 or DTC124ES
Q9,10,17~20 :2SD1302(S,T)
Q11,12,15,16,38,39,54,55 :*
Q25~27,36 :UN4112 or DTA124ES
Q35,43,47 :*
Q37,53 :2SC3940A
Q41,44,45,48 :2SC3246
Q49,52 :2SA999(E,F)
Q50 :*
Q51 :*

IC2 :HA12167FB
IC3 :XL24C01AP
IC4 :μPC1297CA
IC5,6 :NJM4580L-D
IC7 :BA10393
IC8 :NJM4565D
IC9 :S-806E-Z

△ Indicates
ted parts are
rademarks of

X-58 (1/2)

Y26-3930-21

(X28-2680-XX)(A/4) -00:X-58 -01:X-58(S)

IC1 :CXP82540-112Q
D37~64 :1SS133 or HSS104
Q56 :*

	X28-2680-00	X28-2680-01
REF	X-58 : JAPAN MADE	X-58 : SINGAPORE MADE
Q56	2SC3311A (Q, R) or 2SC2458 (Y, GR)	2SC2785 (F, E) or 2SC1740S (Q, R)

GND LINE
+B LINE
−B LINE

2SA999
2SC3246
2SC3940A
2SD1302

2SB1375
2SD2012

2SA1175
2SC2785

NJM4565D

DTA124ES DTC124ES
UN4112 2SA1048
2SA933S 2SC1740S
2SC2458

BA10393
NJM4580L-D
XL24C01AP

2SB1370
2SD2061

UPC1297CA

UN4212
2SA1309A
2SC3311A

HA12167FB

- DC voltages are as measured with a high impedance voltmeter with a cassette deck in playback mode and may vary slightly due to variations between instruments or/and units. Bias circuit DC voltage is measured while in the record mode.

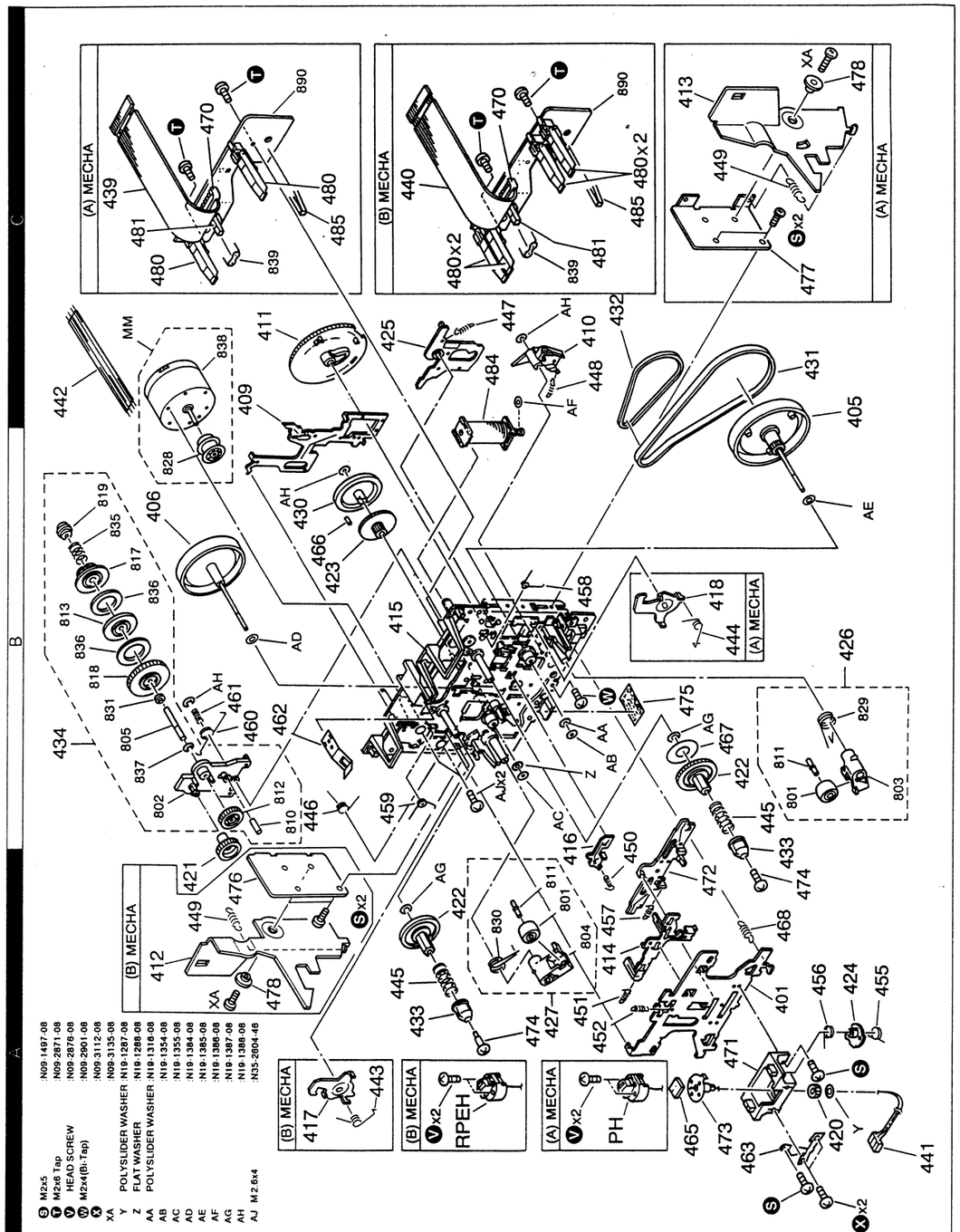
CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical parts. To reduce the risk of electric shock, dielectric strength and resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer. DOLBY and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Noise reduction circuit made under license from Dolby Laboratories Licensing Corporation.

Y26-3930-21

X-58
KENWOOD

X-58

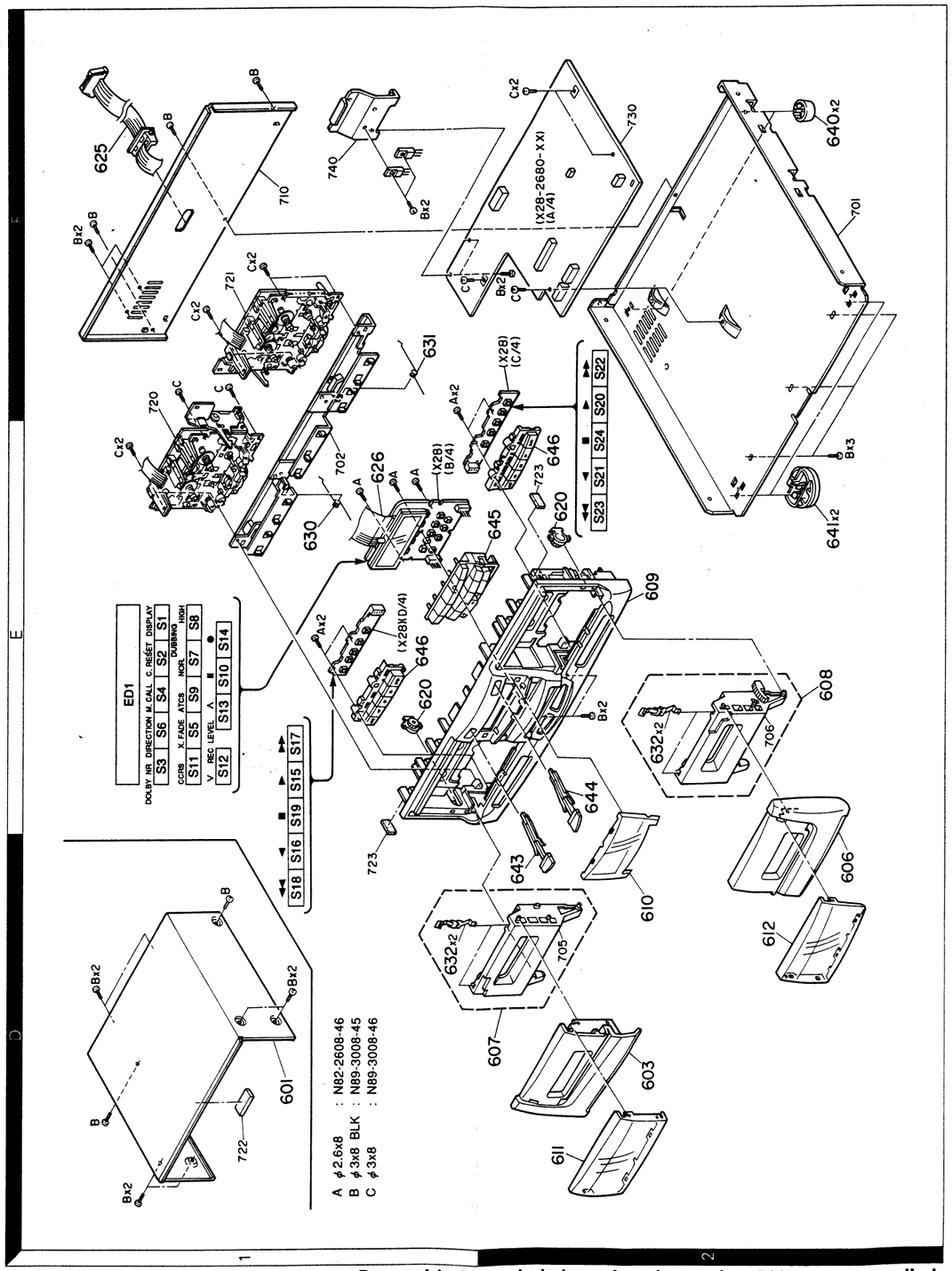
EXPLODED VIEW (MECHANISM)



S	M2x5	N09 1497 08
T	M2x6 Tap HEAD SCREW	N09 2871 08
V	M2x6 Tap HEAD SCREW	N09 2876 08
W	M2x4(Bi-Tap)	N09 2901 08
X		N09 3112 08
XA		N09 3135 08
Y	POLYSLIDER WASHER	N19 1287 08
Z	FLAT WASHER	N19 1288 08
AA	POLYSLIDER WASHER	N19 1316 08
AB		N19 1355 08
AC		N19 1354 08
AD		N19 1364 08
AE		N19 1365 08
AF		N19 1366 08
AG		N19 1367 08
AH		N19 1368 08
AJ	M2.6x4	N35 2604 46

Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW (UNIT)



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

＊ New Parts
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Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			X-58			
601	1D	*	A01-3158-01	METALLIC CABINET		
603	2D		A53-1814-02	CASSETTE LID		A
606	2D		A53-1815-02	CASSETTE LID		B
607	2D	*	A53-1816-03	CASSETTE HOLDER ASSY		
608	2E	*	A53-1818-03	CASSETTE HOLDER ASSY		
609	2E		A60-0617-01	PANEL		
610	2D		B10-2046-03	FRONT GLASS		
611	2D		B10-2047-03	FRONT GLASS		A
612	2D		B10-2048-03	FRONT GLASS		B
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-43	WARRANTY CARD	X	
-			B46-0310-03	WARRANTY CARD	TE	
620	1E,2E		D39-0316-05	DAMPER		
625	1F		E30-2671-05	CORD WITH CONNECTOR		
626	1E		E31-4453-05	WIRING HARNESS (FFC)		
630	1E		G01-3695-04	TORSION COIL SPRING		A
631	1F		G01-3696-04	TORSION COIL SPRING		B
632	1D,2E		G02-1059-04	FLAT SPRING		
			H50-1155-04	ITEM CARTON CASE		
			H50-1243-04	ITEM CARTON CASE	I	W
		*	H50-1244-04	ITEM CARTON CASE	TE	W
			H50-1247-04	ITEM CARTON CASE	M	S
		*	H50-1248-04	ITEM CARTON CASE	YX	S
		*	H50-1249-04	ITEM CARTON CASE	TE	S
-		*	H10-5834-12	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5835-12	POLYSTYRENE FOAMED FIXTURE		
-			H10-5883-02	POLYSTYRENE FOAMED FIXTURE	YMXTE	S
-			H10-5884-02	POLYSTYRENE FOAMED FIXTURE	YMXTE	S
-			H10-5885-02	POLYSTYRENE FOAMED FIXTURE	ITE	W
-			H10-5886-02	POLYSTYRENE FOAMED FIXTURE	ITE	W
-			H20-0586-04	PROTECTION COVER	M	S
-			H20-0586-04	PROTECTION COVER	I	W
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	Y	
-			H25-0382-04	PROTECTION BAG	YXTE	
640	2F		J02-0366-15	FOOT (REAR)		
641	2E		J02-1040-05	FOOT (FRONT)		
643	2D		K29-5974-04	KNOB (EJECT:L)		A
644	2E		K29-5975-04	KNOB (EJECT:R)		B
645	2E		K29-5976-02	KNOB (FUNCTION)		
646	1E,2E		K29-5977-03	KNOB (OPERATION)		
RECORD/PLAYBACK UNIT (X28-2680-XX) -00 : JAPAN MADE -01 : SINGAPORE, MALAYSIA MADE						
C1 ,2			CC45FSL1H221J	CERAMIC 220PF J		
C3 ,4			CK45FB1H681K	CERAMIC 680PF K		
C5 ,6			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C7 ,8			CE04KW1C330M	ELECTRO 33UF 16WV		
C9 ,10			CK45FB1H391K	CERAMIC 390PF K		
C11 ,12			CQ93FMG1H223J	MYLAR 0.022UF J		
C13 ,14			CK45FB1H681K	CERAMIC 680PF K		
C15 ,16			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C17 ,18			CE04KW1C330M	ELECTRO 33UF 16WV		

L: Scandinavia **K**: USA **P**: Canada **R**: Mexico **A**: A DECK **B**: B DECK
Y: PX (Far East, Hawaii) **T**: England **E**: Europe **G**: Germany **S**: SINGAPORE **W**: MALAYSIA
Y: AAFES (Europe) **X**: Australia **M**: Other Areas
⚠ indicates safety critical components.

X-58

PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C19 ,20			CK45FB1H391K	CERAMIC 390PF K		
C21 ,22			CQ93FMG1H223J	MYLAR 0.022UF J		
C23 ,24			CK45FB1H332K	CERAMIC 3300PF K		
C25 ,26		*	CQ93FMG1H433J	MYLAR 0.043UF J		
C27 ,28			CK45FB1H332K	CERAMIC 3300PF K		
C29 -38			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C39 ,40			CK45FB1H682K	CERAMIC 6800PF K		
C41 ,42			CC45FSL1H221J	CERAMIC 220PF J		
C43 ,44			CQ93FMG1H333J	MYLAR 0.033UF J		
C45 ,46			CE04KW1V100M	ELECTRO 10UF 35WV		
C47 -52			CQ93FMG1H222J	MYLAR 2200PF J		
C53 -56			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C57 ,58			CE04KW1V100M	ELECTRO 10UF 35WV		
C59 ,60			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C61 ,62			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C63 -66			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C67 ,68			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C69 ,70			CC45FSL1H221J	CERAMIC 220PF J		
C71 ,72			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C73 -76			CK45FB1H471K	CERAMIC 470PF K		
C77			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C78 ,79			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C80			CC45FSL1H560J	CERAMIC 56PF J		
C81 ,82			CC45FSL1H180J	CERAMIC 18PF J		
C83 -85			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C86			CQ93FMG1H104J	MYLAR 0.10UF J		
C87			CQ93FMG1H332J	MYLAR 3300PF J		
C88			CE04KW1C331M	ELECTRO 330UF 16WV		
C89 ,90			CE04KW1C101M	ELECTRO 100UF 16WV		
C91 ,92			CE04KW1A331M	ELECTRO 330UF 10WV		
C93 ,94			C91-1436-05	FILM 220PF J		
C95 ,96			C91-1434-05	FILM 150PF J		
C97 -100			CK45FF1H223Z	CERAMIC 0.022UF Z		
C101,102			CK45FF1H103Z	CERAMIC 0.010UF Z		
C103,104			CK45FB1H561K	CERAMIC 560PF K		
C105			CC45FSL2H100D	CERAMIC 10PF D		
C106			CE04KW1V100M	ELECTRO 10UF 35WV		
C107			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C108			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C109			CE04KW1V100M	ELECTRO 10UF 35WV		
C110,111			CQ93FMG1H562J	MYLAR 5600PF J		
C112			CK45FF1H103Z	CERAMIC 0.010UF Z		
C113			CQ93HP2A103J	MYLAR 0.010UF J		
C114,115			CK45FB1H102K	CERAMIC 1000PF K		
C116			CE04KW1A101M	ELECTRO 100UF 10WV		
C117			CK45FF1H223Z	CERAMIC 0.022UF Z		
C118			CE04KW1V101M	ELECTRO 100UF 35WV		
C119,120			CE04KW1H101M	ELECTRO 100UF 50WV		
C121,122			CE04KW1V100M	ELECTRO 10UF 35WV		
C123			CE04KW1E221M	ELECTRO 220UF 25WV		
C124,125			CE04KW1V101M	ELECTRO 100UF 35WV		
C128,129			CE04KW1E471M	ELECTRO 470UF 25WV		
C130,131			CE04KW1H101M	ELECTRO 100UF 50WV		
C132			CE04KW1V100M	ELECTRO 10UF 35WV		
C133			CC45FSL1H101J	CERAMIC 100PF J		

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C134			CE04KW1V100M	ELECTRO 10UF 35WV		
C135			CE04DW1C471M	ELECTRO 470UF 16WV		
C136,137			CE04DW1E331M	ELECTRO 330UF 25WV		
C138			CE04DW1C471M	ELECTRO 470UF 16WV		
C139			CE04KW1V100M	ELECTRO 10UF 35WV		
C140			CE04KW1A101M	ELECTRO 100UF 10WV		
C141			CE04KW1V100M	ELECTRO 10UF 35WV		
C142			CE04KW0J471M	ELECTRO 470UF 6.3WV		
C143			CE04KW1V100M	ELECTRO 10UF 35WV		
C144			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C145			CK45FF1H103Z	CERAMIC 0.010UF Z		
C147			CK45FB1H102K	CERAMIC 1000PF K		
C148			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C149			CK45FF1H223Z	CERAMIC 0.022UF Z		
C150			CE04KW1V100M	ELECTRO 10UF 35WV		
C151,152			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C153			CE04KW1A471M	ELECTRO 470UF 10WV		
C154			CE04KW1E221M	ELECTRO 220UF 25WV		
C155,156			CK45FF1H473Z	CERAMIC 0.047UF Z		
C157,158			CK45FF1H223Z	CERAMIC 0.022UF Z		
C159			CK45FF1H103Z	CERAMIC 0.010UF Z		
CN4			E40-4173-05	FLAT CABLE CONNCTOR		
CN5			E40-4213-05	FLAT CABLE CONNCTOR		
			J19-3313-04	HOLDER		
J3 ,4			J11-0098-05	WIRE CLAMPER		
L1 ,2			L79-1201-05	LC FILTER		
L3 ,4			L40-1035-29	SMALL FIXED INDUCTOR(10MH, J)		
L5 ,6			L32-0547-05	BIAS OSCILATING COIL		
L7 ,8			L40-1035-29	SMALL FIXED INDUCTOR(10MH, J)		
L9			L32-0570-05	BIAS OSCILATING COIL		
X1			L78-0294-05	RESONATOR (10.000M)		
CP1			R90-0487-05	MULTI-COMP 47KX4 J 1/6W		
CP2			R90-0810-05	MULTI-COMP 10K X6		
⚠ R25 ,26			RS14KB3D220J	FL-PROOF RS 22 J 2W		
⚠ R209,210			RS14KB3D182J	FL-PROOF RS 1.8K J 2W		
⚠ R216			RS14KB3D271J	FL-PROOF RS 270 J 2W		
R217			RS14KB3D101J	FL-PROOF RS 100 J 2W		
VR1 ,2			R12-3685-05	TRIMMING POT.(10K ﾌﾀ)		
VR3 ,4			R12-3686-05	TRIMMING POT.(22K ﾌﾀ)		
K1			S76-0018-05	MAGNETIC RELAY		
S1 -24			S40-1064-05	PUSH SWITCH		
D1			HSS104	DIODE		
D1			1SS133	DIODE		
D2			HZS4.7N(B2)	ZENER DIODE		
D2			MTZJ4.7(B)	ZENER DIODE		S
D2			RD4.7ES(B2)	ZENER DIODE		
D3			HSS104	DIODE		
D3			1SS133	DIODE		
D4 -7			S5688B	DIODE		
D4 -7			1SR139-100	DIODE		
D8 -13			HSS104	DIODE		

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	D8 -13			1SS133	DIODE		
	D14			HZS2.7N(B2)	ZENER DIODE		
	D14			MTZJ2.7(B)	ZENER DIODE		S
	D14			RD2.7ES(B2)	ZENER DIODE		
⚠	D15 -17			HSS104	DIODE		
⚠	D15 -17			1SS133	DIODE		
	D18			HZS6.2N(B2)	ZENER DIODE		
	D18			MTZJ6.2(B)	ZENER DIODE		S
	D18			RD6.2ES(B2)	ZENER DIODE		
⚠	D19 ,20			S5688B	DIODE		
⚠	D19 ,20			1SR139-100	DIODE		
	D21			HZS30N(B2)	ZENER DIODE		
	D21			MTZJ30(B)	ZENER DIODE		S
	D21			RD30ES(B2)	ZENER DIODE		
	D22			HZS3.9N(B2)	ZENER DIODE		
	D22			MTZJ3.9(B)	ZENER DIODE		S
	D22			RD3.9ES(B2)	ZENER DIODE		
⚠	D23 -26			S5688B	DIODE		
⚠	D23 -26			1SR139-100	DIODE		
	D27			HZS5.6N(B2)	ZENER DIODE		
	D27			MTZJ5.6(B)	ZENER DIODE		S
	D27			RD5.6ES(B2)	ZENER DIODE		
	D28			HZS4.7N(B2)	ZENER DIODE		
	D28			MTZJ4.7(B)	ZENER DIODE		S
	D28			RD4.7ES(B2)	ZENER DIODE		
⚠	D29 -33			HSS104	DIODE		
⚠	D29 -33			1SS133	DIODE		
	D34			HZS6.8N(B2)	ZENER DIODE		
	D34			MTZJ6.8(B)	ZENER DIODE		S
	D34			RD6.8ES(B2)	ZENER DIODE		
	D35 -68			HSS104	DIODE		
	D35 -68			1SS133	DIODE		
	D69			HZS30N(B2)	ZENER DIODE		
	D69			MTZJ30(B)	ZENER DIODE		S
	D69			RD30ES(B2)	ZENER DIODE		
⚠	D70 -73			S5688B	DIODE		
⚠	D70 -73			1SR139-100	DIODE		
	D74 -76			HSS104	DIODE		
	D74 -76			1SS133	DIODE		
	ED1			FIP9EM6R	INDICATOR TUBE		
	IC1		*	CXP82540-112Q	MI-COM IC		
	IC2			HA12167FB	IC(DOLBY B/C, REC EQ)		
	IC3		*	XL24C01AP	MEMORY IC		
	IC4			UPC1297CA	IC(DOL HX PRO SYSTEM)		
	IC5 ,6			NJM4580L-D	IC(OP AMP X2)		
	IC7			BA10393	IC(DUAL COMPALATOR)		
	IC8			NJM4565D	IC(OP AMP X2)		
	IC9			S-806E-Z	ANALOGUE IC		
	Q1 -8			DTC124ES	DIGITAL TRANSISTOR		
	Q1 -8			UN4212	TRANSISTOR		
	Q9 ,10			2SD1302(S,T)	TRANSISTOR		
	Q11 ,12			2SC1740S(Q,R)	TRANSISTOR		S
	Q11 ,12			2SC2458(Y,GR)	TRANSISTOR		
	Q11 ,12			2SC2785(F,E)	TRANSISTOR		S
	Q11 ,12			2SC3311A(Q,R)	TRANSISTOR		

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Q13 ,14			DTC124ES	DIGITAL TRANSISTOR		
Q13 ,14			UN4212	TRANSISTOR		
Q15 ,16			2SC1740S(Q,R)	TRANSISTOR		S
Q15 ,16			2SC2458(Y,GR)	TRANSISTOR		
Q15 ,16			2SC2785(F,E)	TRANSISTOR		S
Q15 ,16			2SC3311A(Q,R)	TRANSISTOR		
Q17 -20			2SD1302(S,T)	TRANSISTOR		
Q21 -24			DTC124ES	DIGITAL TRANSISTOR		
Q21 -24			UN4212	TRANSISTOR		
Q25 -27			DTA124ES	DIGITAL TRANSISTOR		
Q25 -27			UN4112	TRANSISTOR		
Q28 -34			DTC124ES	DIGITAL TRANSISTOR		
Q28 -34			UN4212	TRANSISTOR		
Q35			2SA1048(Y,GR)	TRANSISTOR		
Q35			2SA1175(F,E)	TRANSISTOR		S
Q35			2SA1309A(Q,R)	TRANSISTOR		
Q35			2SA933S(Q,R)	TRANSISTOR		S
Q36			DTA124ES	DIGITAL TRANSISTOR		
Q36			UN4112	TRANSISTOR		
Q37			2SC3940A	TRANSISTOR		
Q38 ,39			2SC1740S(Q,R)	TRANSISTOR		S
Q38 ,39			2SC2458(Y,GR)	TRANSISTOR		
Q38 ,39			2SC2785(F,E)	TRANSISTOR		S
Q38 ,39			2SC3311A(Q,R)	TRANSISTOR		
Q40			DTC124ES	DIGITAL TRANSISTOR		
Q40			UN4212	TRANSISTOR		
Q41			2SC3246	TRANSISTOR		
Q42			DTC124ES	DIGITAL TRANSISTOR		
Q42			UN4212	TRANSISTOR		
Q43			2SA1048(Y,GR)	TRANSISTOR		
Q43			2SA1175(F,E)	TRANSISTOR		S
Q43			2SA1309A(Q,R)	TRANSISTOR		
Q43			2SA933S(Q,R)	TRANSISTOR		S
Q44 ,45			2SC3246	TRANSISTOR		
Q46			DTC124ES	DIGITAL TRANSISTOR		
Q46			UN4212	TRANSISTOR		
Q47			2SA1048(Y,GR)	TRANSISTOR		
Q47			2SA1175(F,E)	TRANSISTOR		S
Q47			2SA1309A(Q,R)	TRANSISTOR		
Q47			2SA933S(Q,R)	TRANSISTOR		S
Q48			2SC3246	TRANSISTOR		
⚠ Q49			2SA999(E,F)	TRANSISTOR		
⚠ Q50			2SD2012	TRANSISTOR		
⚠ Q50			2SD2061	TRANSISTOR		
⚠ Q51			2SB1370	TRANSISTOR		
⚠ Q51			2SB1375	TRANSISTOR		
Q52			2SA999(E,F)	TRANSISTOR		
⚠ Q53			2SC3940A	TRANSISTOR		
Q54 -56			2SC1740S(Q,R)	TRANSISTOR		S
Q54 -56			2SC2458(Y,GR)	TRANSISTOR		
Q54 -56			2SC2785(F,E)	TRANSISTOR		S
Q54 -56			2SC3311A(Q,R)	TRANSISTOR		
MECHANISM ASS'Y (D40-138X-XX) 1-05 : A DECK 2-05 : B DECK						
401	2A	*	A10-3178-08	HEAD CHASSIS		

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405	2C	*	D01-0175-08	FLYWHEEL (R) ASSY		
406	1B	*	D01-0176-08	FLYWHEEL (L) ASSY		
409	1C	*	D10-3470-08	SHIFT LEVER		
410	2C	*	D10-3471-08	HEAD CHANGE ARM		
411	1C	*	D10-3472-08	CAM GEAR		
412	1A	*	D10-3494-08	EJECT LEVER (L)		B
413	2C	*	D10-3493-08	EJECT LEVER (R)		A
414	2A	*	D10-3478-08	SELET LEVER		
415	1B	*	D10-3479-08	CHASSIS ØS ASSY		
416	2A	*	D10-3480-08	C/R LEVER		
417	1A	*	D10-3502-08	ARM (LEFT) (INTER LØCK)		B
418	2B	*	D10-3503-08	ARM (RIGHT) (INTER LØCK)		A
420	2A	*	D13-0981-08	RØTATIØN GEAR		
421	1A	*	D13-1616-08	REW GEAR		
422	1A,2B	*	D13-1617-08	REEL GEAR		
423	1B	*	D13-1618-08	IDLER GEAR		
424	2A	*	D13-1621-08	RETURN GEAR		
425	1C	*	D13-1622-08	TRIGGER ARM		
426	2B	*	D14-0367-08	PINCH ARM (R) ASSY		
427	2A	*	D14-0368-08	PINCH ARM (L) ASSY		
430	1B	*	D15-0369-08	IDLER PULLEY		
431	2C	*	D16-0375-08	DRIVE BELT		
432	2C	*	D16-0376-08	CLUTCH BELT		
433	1A,2A		D19-0270-18	REEL CAP (A)		
434	1B	*	D19-0287-08	CLUTCH ARM ASSY		
439	1C	*	E35-0358-08	15P FLAT RIBBØN WIRE		A
440	1C		E35-0934-08	15P FLAT RIBBØN WIRE		B
441	2A	*	E35-1005-08	3P HEAD WIRE ASSY		A
441	2A	*	E35-1006-08	5P HEAD WIRE ASSY		B
442	1C	*	E35-0986-08	MØTØR WIRE		
443	1A	*	G01-3706-08	SPRING (L)		B
444	2B	*	G01-3707-08	SPRING (R)		A
445	1A,2B	*	G01-3709-08	B.T SPRING		
446	1B	*	G01-3710-08	SHIFT LEVER SP		
447	1C	*	G01-3711-08	TRIGGER ARM SP		
448	2C	*	G01-3712-08	HEAD CHANGE ARM SP		
449	1A,2C	*	G01-3708-08	EJECT SP		
450	2A	*	G01-3714-08	C/R LEVER SP		
451	2A	*	G01-3715-08	SELECT SP		
452	2A	*	G01-3716-08	SHIFT SP		
455	2A	*	G01-3718-08	RETURN SPR		
456	2A	*	G01-3719-08	FWD SPR		
457	2A	*	G01-3720-08	HEAD RETURN PLATE SP		
458	2B	*	G01-3721-08	BRAKE SP (R)		
459	1B	*	G01-3722-08	BRAKE SP (L)		
460	1B	*	G01-3724-08	CLUTCH ARM SPRING (B)		
461	1B	*	G01-3725-08	CLUTCH SP		
462	1B		G02-0913-08	PACK SPRING		
463	2A	*	G02-1043-08	AZIMUTH SPR		
465	2A	*	G11-2117-08	HEAD WIRE CLAMP		
466	1B	*	G11-2205-08	TUBE		
467	2B		G16-0791-08	REFLECT SEAL		
468	2A		G01-3739-08	HEAD CHASSIS SP		
470	1C		J19-3652-08	CABLE HØLDER		

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471	2A	*	J19-3709-08	HEAD BASE		
472	2A	*	J21-6135-08	HEAD RETURN PLATE		
473	2A	*	J21-6199-08	HEAD PLATE ASSY		
474	2A		J42-0183-08	REEL BUSH		
475	2B	*	J69-0086-08	FILAMENT TAPE		
476	1A	*	J21-6178-08	BRACKET (L)		B
477	2C	*	J21-6179-08	BRACKET (R)		A
478	1A,2C	*	J31-0851-08	EJECT COLLAR		
AA	2B		N19-1316-08	POLY WASHER		
AB	2B		N19-1354-08	NYLON WASHER		
AC	2B		N19-1355-08	NYLON WASHER		
AD	1B	*	N19-1384-08	POLY WASHER		
AE	2B	*	N19-1385-08	POLY WASHER		
AF	2C	*	N19-1386-08	POLY WASHER		
AG	1A,2B	*	N19-1387-08	TEFRON WASHER		
AH	2C,1B	*	N19-1388-08	POLY WASHER		
AJ	1B		N35-2604-46	BINDING SCREW		
S	1A,2A		N09-1497-08	TAP TITE SCREW 2*5		
T	2C,1C		N09-2871-08	TAPPING SCREW		
V	1A,2A		N09-2876-08	HEAD SCREW		
W	2B		N09-2901-08	BIND TAP TITE SCREW		
X	2A	*	N09-3112-08	AZIMUTH SCREW		
XA	2C,1A	*	N09-3135-08	BIND TAP TITE SCREW 2.6*6		
Y	2A		N19-1287-08	POLY WASHER		
Z	2B		N19-1288-08	POLY WASHER		
480	1C,2C	*	S74-0033-08	REC SWITCH		
481	1C,2C	*	S74-0042-08	PLAY SWITCH		
484	1C	*	T94-0233-08	SOLENOID ASSY		
485	1C,2C		T95-0125-08	PHOTO INTERRUPTER		
MM	1C	*	T42-0687-08	MOTOR ASSY		
PH	2A		T31-0072-08	ROTATION HD(PB)KP-7442-CS-8352		
RPEH	1A		T39-0027-08	ROTATION HD(RP)KC-9242-CB-8354		

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X-58

SPECIFICATIONS

Track ..... **4-track, 2-channel stereo**
Recording system ..... **AC bias system**
(Frequency : 105kHz)

Heads
- **A deck : Playback head** **1**
- **B deck : Playback recording head** **1**
- **Erasing head** **1**

Motors
- **A deck** **1**
- **B deck** **1**

Fast winding time (C-60 tape) **Approx. 110 seconds**

Frequency response
- **Normal tape** ..... **30Hz~17,000Hz±3dB**
- **CrO2 tape** ..... **30Hz~18,000Hz±3dB**
- **Metal tape** ..... **30Hz~19,000Hz±3dB**

Signal to noise ratio (Metal tape)
- **Dolby C NR ON** **70dB**
- **Dolby B NR ON** **63dB**
- **Dolby NR OFF** **56dB**

Harmonic distortion ..... **Less than 3.0%**
(at 1kHz, 3rd T.H.D., metal tape)
Wow & Flutter ..... **0.1% (W.R.M.S.)**

[General]
Dimensions ..... **W : 360mm (14-3/16")**
H : 120mm (4-3/4")
D : 353mm (13-2/8")
Weight (net) ..... **3.6kg (7.9lb)**

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changes without notice.

Note :
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the General Market (M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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